

APPENDIX E

Current Status of Virginia's TMDL Program

In 1997, the Virginia General Assembly enacted the Water Quality Monitoring, Information, and Restoration Act (WQMIRA), §62.1-44.19:4 through 19:8 of the Code of Virginia. This statute directs DEQ to develop a list of impaired waters, Total Maximum Daily Loads (TMDLs) for each impairment, and implementation plans for these TMDLs.

Cooperative Effort

DEQ administers the TMDL process for Virginia and formally submits the TMDLs to EPA for approval. Once EPA approves a TMDL, the Virginia State Water Control Board must also approve it. The Department of Conservation and Recreation (DCR) and the Department of Mines, Minerals, and Energy (DMME) have signed Memoranda of Understanding with DEQ agreeing to a cooperative effort in the TMDL and Implementation Plan development processes. DCR has the primary lead for the development of TMDL Implementation Plans for nonpoint source TMDLs. DCR also provides assistance pertaining to nonpoint source issues during the TMDL development process. DMME assists with the development and implementation of TMDLs involving pollutants from mineral extraction activities. The Virginia Department of Health also participates in a cooperative effort by assisting in the development of TMDLs and TMDL IPs for impaired shellfish waters.

TMDL Schedule

In 1998, the American Canoe Association and the American Littoral Society filed a complaint against the EPA for failure to comply with the provisions of §303(d) of the Clean Water Act in Virginia. As a result, EPA signed a Consent Decree with the plaintiffs in 1999 that contains Virginia's TMDL development schedule through year 2010. Also, under the Consent Decree, EPA agrees to develop TMDLs on these impaired waters to meet the schedule if Virginia fails to do so.

Under the Consent Decree schedule, Virginia has to develop TMDLs for 644 segments of impaired waters by 2010. As of December 2003, EPA has approved 68 TMDLs covering 49 Consent Decree waters. Several others will be completed in time to meet the Consent Decree requirement of submitting TMDLs for 83 impaired segments by May 1, 2004. EPA has also approved nine TMDLs for shellfish waters covered by the Consent Decree (see TMDL Activity Summary attached). A complete list of EPA-approved and draft TMDLs is maintained on DEQ's TMDL web site at <http://www.deq.state.va.us/tmdl/>

Waters that have been identified as impaired outside of the Consent Decree are scheduled for TMDL development within 12 years of their initial listing in the 305(b)/303(d) Water Quality Assessment Integrated Report. Whenever possible, DEQ tries to combine such waters and impairments with Consent Decree waters and impairments in a watershed-based approach to TMDL development.

DEQ has developed draft TMDL development schedules for impaired streams, lakes and estuaries as well as for impaired shellfish waters for the next biennium ending May 1, 2006 (see 2006 TMDL schedules attached).

TMDL Implementation Plans

Section 303(d) of the Clean Water Act, and current EPA regulations do not require the development of TMDL implementation strategies. However, the Code of Virginia directs DEQ in section 62.1-44.19.7 to "develop and implement a plan to achieve fully supporting status for impaired waters". The Act also establishes that the implementation plan shall include the date of expected achievement of water quality objectives, measurable goals, corrective actions necessary and the associated cost, benefits and environmental impact of addressing the impairments. To date Virginia has completed and is implementing three implementation plans that address 13 of the EPA approved

TMDLs. Virginia, together with the affected local governments, has also developed its first implementation plan for an urban bacteria TMDL. A guidance manual for the development of TMDL IPs is available from DEQ and DCR. All draft and completed IPs are also available on the web site cited above.

Virginia DEQ TMDL Activity Summary as of December 31, 2003

TMDL Activity from 1/1/99 to 12/31/02								
	Total	Bacteria	Benthic	PCB	Nitrate	pH	DO	Other
TMDLs	51	38	10	2	1			
CD segments	36							
CD Delistings - full	9 8	6 6	3 2					
CD Delistings - partial	1		1					
TMDL Activity from 1/1/03 to 12/31/03								
	Total	Bacteria	Benthic	PCB	Nitrate	pH	DO	Other
TMDLs	17	8	5	3	1			
CD segments	13							
CD Delistings - full	11 11	6 6	2			2	1	
CD Delistings - partial	0							
TMDL Activity in Shellfish Waters from 1/1/03 to 12/31/03								
	Total	Bacteria	Other					
TMDLs	9	9						
CD segments	9	9						
CD Delistings - full	55	55						
CD Delistings - partial	0	0						
TMDL Implementation Activity from 8/1/01 to 12/31/03								
	Total	Freshwater TMDLs			Shellfish Water TMDLs			
TMDLs Ips	14	14						
- Urban watersheds	1	1						
- Rural watersheds	13	13						
- Mixed watersheds								
TMDL IP Funding Areas	13	13						
- Urban watersheds								
- Rural watersheds	13	13						
- Mixed								

Virginia's Proposed 2006 TMDL Development Schedule (Revised 2/19/04)

WBID1	Stream	WB County or City	Length	Unit	Cause
Potomac/Shenandoah River Basin					
VAN-A19R	Broad Run	Prince William	1.51	Miles	Bacteria
VAN-A19R	Broad Run	Prince William	7.26	Miles	Bacteria
VAN-A19R	Kettle Run	Prince William	7.59	Miles	Bacteria
VAN-A19R	South Run	Fauquier, Prince William	2.42	Miles	Benthic
VAN-A23R	Bull Run	Prince William, Fairfax (Boundary Line), Manassas Park	15.64	Miles	Benthic
VAN-A23R	Popes Head Creek	Fairfax	4.92	Miles	Benthic
VAP-A31E	Mattox Creek	Westmoreland	34.03	Miles	Bacteria
VAP-A31R	Mattox Creek	Westmoreland	34.03	Miles	pH-1998-Temp/Bacteria -2002
VAP-A31R	Pinehill Creek	Westmoreland		Miles	pH
VAV-B17R	North River	Rockingham Co.	25.12	Miles	Bacteria
VAV-B18R	Beaver Creek				Benthic
VAV-B21R	Dry River	Rockingham	2.86	Miles	Temp
VAV-B23R	North River	Rockingham Co., Augusta Co.	16.13	Miles	Benthic
VAV-B38R	Mill Creek	Page Co.	6.73	Miles	Bacteria
VAV-B45R	North Fork Shenandoah River	Rockingham Co., Shenandoah, Broadway, Timberville, Mt. Jackson	4.86	Miles	Benthic
VAV-B45R	North Fork Shenandoah River	Rockingham Co., Shenandoah, Broadway, Timberville, Mt. Jackson	14.27	Miles	Bacteria
VAV-B48R	Mill Creek	Shenandoah Co.	15.03	Miles	Benthic
VAV-B49R	Stony Creek	Shenandoah	5.65	Miles	Bacteria
VAV-B52R	Cedar Creek	Shenandoah	18.94	Miles	Temp
Rappahannock River Basin					
VAN-E14R	Robinson River	Madison	3.65	Miles	Bacteria
VAN-E15R	Little Dark Run	Madison	4.35	Miles	Bacteria
VAN-E17R	Mine Run	Orange	9.95	Miles	Bacteria
VAN-E17R	Mountain Run	Orange	9.79	Miles	Bacteria
VAP-E22R	Occupacia Creek	Essex	2.76	Miles	pH
VAP-E22R	Occupacia Creek	Essex			Bacteria
VAP-E23E	Hoskins Creek	Essex	0.06	Sq. Mi.	Bacteria
York River Basin					
VAP-F04R	South Anna River	Hanover	4.83	Miles	Bacteria
VAP-F04R	South Anna River	Hanover	22.22	Miles	Bacteria
VAN-F06R	Beaver Creek	Louisa	2.51	Miles	Bacteria
VAN-F06R	Goldmine Creek	Louisa	7.16	Miles	Bacteria
VAN-F06R	Mountain Run	Orange	2.6	Miles	Bacteria
VAN-F07R	Pamunkey	Orange	12.14	Miles	Bacteria

WBID1	Stream	WB County or City	Length	Unit	Cause
	Creek				
VAN-F07R	Plentiful Creek	Spotsylvania	4.94	Miles	Bacteria
VAN-F07R	Terry's Run	Orange	5.45	Miles	Bacteria
VAP-F12R	Pamunkey River	Hanover	18.85	Miles	Bacteria
VAP-F13E	Pamunkey River	New Kent, King William	1.35	Sq. Mi.	Bacteria
VAP-F13E	Pamunkey River tidal portions	Hanover, King William, New Kent	10.71	Sq Mi	DO
VAP-F13R	Totopotomoy Creek	Hanover	9.6	Miles	Bacteria
VAP-F23E	Mattaponi River	King and Queen	8.15	Miles	pH
Chowan River Basin					
VAT-K13R	Tarrara Creek	Southampton	12.8	Miles	DO
VAC-K14R	Big Hounds Creek	Lunenburg	10.35	Miles	Bacteria
VAC-K14R	Nottoway River	Lunenburg, Prince Edward, Nottoway	17.76	Miles	Bacteria
VAC-K15R	Little Nottoway River	Nottoway	9.85	Miles	Bacteria
VAC-K16R	Beaver Pond Creek	Dinwiddie	7.17	Miles	Bacteria
VAP-K20R	Butterwood Creek (and tribs)	Dinwiddie	46.43	Miles	DO
VAP-K22R	Sappony Creek	Dinwiddie, Sussex	20.19	Miles	DO
VAP-K22R	Sappony Creek	Dinwiddie, Sussex			Bacteria
VAP-K25R	Raccoon Creek	Sussex, Southampton	19.3	Miles	Bacteria
VAP-K25R	Raccoon Creek, Spring Creek	Sussex, Southampton	35.54	Miles	DO, pH
VAT-K27R	Three Creek	Southampton	10.91	Miles	DO, pH
VAP-K32R	Blackwater River, Cypress Swamp	Surry	17.1	Miles	DO, pH
VAP-K32R	Cypress Swamp	Surry	5.35	Miles	Bacteria
VAP-K32R	Spring Branch	Sussex, Waverly	2.7	Miles	BC
VAT-K34R	Mill Creek, Swamp	Isle of Wight	10.13	Miles	Bacteria
VAT-K34R	Mill Swamp	Isle of Wight	10.13	Miles	DO, pH
VAT-K34R	Rattlesnake Creek, Swamp	Isle of Wight	7.5	Miles	Bacteria
VAT-K34R	Rattlesnake Swamp	Isle of Wight	7.5	Miles	DO, pH
VAT-K35R	Seacock Swamp	Sussex	2.47	Miles	pH
VAT-K35R	Seacock Swamp	Sussex	0.8	Miles	DO, pH
VAT-K36R	Blackwater River	Southampton, Isle of Wight	10	Miles	DO, pH
VAT-K37R	Buckhorn Creek	Southampton	1.52	Miles	pH
VAT-K38R	Somerton Creek	Southampton	13.78	Miles	DO, pH
VAT-K39R	Feeder to Dismal Swamp	Chesapeake	14.16	Miles	pH
VAT-K40R	Northwest River				DO, pH
VAT-K41R	Albemarle Canal/North	Virginia Beach, Chesapeake	11.84	Miles	DO

WBID1	Stream	WB County or City	Length	Unit	Cause
	Landing River				
VAT-K41R	Milldam Creek	Virginia Beach, Chesapeake	3.29	Miles	DO/Bacteria/TP
VAT-K41R	West Neck Creek	Chesapeake	5.28	Miles	DO
VAT-K41R	West Neck Creek	Virginia Beach	1	Miles	Bacteria
VAT-K42E	Nawney Creek	Virginia Beach	0.2	Sq Mi	DO
VAT-K42E	Nawney Creek	Virginia Beach	0.12	Sq. Mi.	Bacteria
Roanoke River Basin					
VAW-L02R	North Fork Roanoke River	Montgomery	6.56	Miles	Bacteria
VAW-L02R	Wilson Creek	Montgomery	5	Miles	Bacteria
VAW-L03R	Roanoke River	Roanoke Co., Salem City	6.06	Miles	PCBs, Bacteria, Temp
VAW-L03R	Roanoke River	Roanoke Co.	5.62	Miles	PCBs/Temp
VAW-L03R	Roanoke River	City of Salem	1.2	Miles	Bacteria/PCBs
VAW-L04R	Mason Creek	Roanoke	7.61	Miles	Bacteria
VAW-L04R	Ore Branch	Roanoke Co., Roanoke City	3.9	Miles	Bacteria
VAW-L04R	Peters Creek	Roanoke	7.17	Miles	Bacteria
VAW-L04R	Roanoke River	Roanoke Co., Salem City, Roanoke City	11.72	Miles	Bacteria/Benthic
VAW-L04R	Roanoke River	Bedford, Franklin	6.26	Miles	Bacteria
VAW-L07R	Beaverdam Creek	Bedford	5.58	Miles	Bacteria
VAW-L07R	Beaverdam Creek	Bedford	5.58	Miles	Bacteria
VAW-L12L	Smith Mountain Lake	Bedford, Franklin	378	Acres	Bacteria/PCBs
VAW-L13L	Leesville Lake (Pigg River)	Pittsylvania	154	Acres	Bacteria/PCBs
VAW-L13R	Old Womans Creek	Pittsylvania	4.86	Miles	Bacteria
VAW-L14R	Pigg River	Franklin	20	Miles	Bacteria
VAW-L14R	Storey Creek	Franklin	11.66	Miles	Bacteria
VAW-L16R	Pigg River	Franklin	15.54	Miles	Bacteria
VAW-L17R	Snow Creek	Pittsylvania	10.98	Miles	Bacteria
VAW-L18R	Pigg River	Pittsylvania	14.31	Miles	Bacteria
VAC-L30R	Roanoke River	Campbell, Pittsylvania, Halifax	8.34	Miles	Bacteria
VAC-L30R	Roanoke River	Campbell, Pittsylvania, Halifax, Charlotte	55.79	Miles	VDH(PCB)
VAC-L30R	Roanoke River	Campbell, Pittsylvania			Bacteria
VAC-L30R	Roanoke River	Campbell, Pittsylvania			Bacteria
VAC-L36R	Turnip Creek	Charlotte			Bacteria
VAC-L37R	Cub Creek	Charlotte			Bacteria
VAC-L38R	Roanoke River	Charlotte	12.58	Miles	Bacteria
VAC-L40R	Buffalo Creek	Charlotte			Bacteria
VAC-L40R	Roanoke River	Charlotte, Halifax	18.24	Miles	Bacteria
New River Basin					
VAS-N06R	Chestnut Creek	Carroll, Grayson, Galax	15	Miles	Benthic
VAS-N31R	Hunting Camp Creek	Bland	6.29	Miles	Benthic

WBID1	Stream	WB County or City	Length	Unit	Cause
VAS-N31R	Hunting Camp Creek	Bland	6.29	Miles	Bacteria
VAS-N37R	Laurel Fork	Tazewell	2.84	Miles	DO/Bacteria/ Benthic
Tennessee/Big Sandy River Basin					
VAS-O11R	North Fork Holston River	Washington	5.34	Miles	Benthic
VAS-P03R	Middle Creek	Tazewell	10.7	Miles	Benthic
VAS-P13R	Stock Creek	Scott	0.7	Miles	Benthic
VAS-P17R	Callahan Creek	Wise	1.58	Miles	Benthic
VAS-P17R	Powell River	Wise	3.3	Miles	Bacteria
VAS-P20R	North Fork Powell River	Lee	3.94	Miles	Benthic
VAS-P20R	North Fork Powell River	Lee	3.94	Miles	Benthic
VAS-P20R	North Fork Powell River	Lee			Bacteria
VAS-P20R	Straight Creek	Lee	7.1	Miles	Bacteria
VAS-P20R	Straight Creek, Stone Creek and tributaries	Lee	38.1	Miles	Benthic
VAS-Q03R	Knox Creek	Buchanan	18	Miles	Benthic
VAS-Q03R	Knox Creek	Buchanan			Bacteria
VAS-Q03R	PawPaw Creek	Buchanan	4.52	Miles	Benthic
VAS-Q12R	Russell Prater Creek	Dickenson	11.4	Miles	Benthic
indicates non-consent decree waters					
indicates natural conditions					

Virginia's Proposed 2006 TMDL Development Schedule for Shellfish Waters (Revised 2/29/04)

DSS survey #	# of Impaired Segments	Waterway	County
76	3	Messongo and Guilford Creeks	Accomack
81	4	Pungoteague Creek	Accomack
82	3	Nandua and Curratuck Creeks	Accomack
83	2	Craddock Creek	Accomack
90	1	Old Plantation and Elliots Creeks	Accomack
77	4	Hunting and Deep Creeks	Accomack
79	1	Chesconessex Creek	Accomack
80	5	Onancock and Matchotank Creeks	Accomack
86	4	Hungar and Mattawoman Creeks	Accomack
87	1	The Gulf	Accomack
97	1	Seaside: Finney and Folly Creeks	Accomack
98	1	Seaside: Metomkin, Gargathy and Kegotank Bays	Accomack
100	3	Chincoteague Bay	Accomack
99	2	Seaside: Bogues and Shell Bays	Accomack
101	5	Chincoteague and Assateague Islands (South)	Accomack
101A			Accomack
75	2	Pocomoke Sound	Accomack
84	1	Ocohanock Creek	Accomack/Northampton
43	3	Ware River	Gloucester
44	5	Severn River	Gloucester
45	2	Browns Bay and Monday Creek	Gloucester
46	2	Sarah Creek and Perrin River	Gloucester
47	6	York River: Gloucester Point to Cedarbush Creek	Gloucester
42	5	North River	Gloucester/ Mathews
54	13	Back River	Hampton/Poq/York/NN
1A	3	Upper Machodoc Creek	King George
1	1	Rosier Creek	King George/ Westmoreland
22	2	Rappahannock River: Towles Point to Deep Creek	Lancaster
27	2	Rappahannock River: Mud and Parrotts Creeks	Middlesex
28	2	Lagrange and Robinson Creeks	Middlesex
29	1	Urbanna Creek	Middlesex
30	3	Whiting and Meachim Creeks	Middlesex
33	4	Broad and Jackson Creeks	Middlesex
31	2	Locklies and Mill Creeks	Middlesex
32	2	Bush Park and Sturgeon Creeks	Middlesex
35	2	Piankatank River, Upper	Middlesex/Gloucester
34	2	Piankatank River, Lower	Middlesex/Mathews
95	1	Seaside: Eastville Station to Nassawadox	Northampton
14	3	Chesapeake Bay: Mill Creek to Dividing Creek	Northumberland

DSS survey #	# of Impaired Segments	Waterway	County
12	1	Cockrell Creek	Northumberland
13	6	Great Wicomico River	Northumberland
15	4	Dividing Creek	Northumberland
24	1	Farnham Creek	Richmond
23	3	Lancaster, Deep, and Mulberry Creeks	Richmond/Lancaster
63	4	Nansemond River	Suffolk
2	3	Monroe Bay: Monroe and Mattox Creeks	Westmoreland
3	1	Potomac River: Mattox Creek to Currioman Bay	Westmoreland
7	7	Yeocomico River	Westmoreland/Northumberland
51	5	York River: Camp Peary to Yorktown	York/ W'burg
53	10	Poquoson River and Back Creek	York/Poquoson/NN
	154	Number of condemnations in biennium	